**BRIAN HARBOURNE**, University of Nebraska-Lincoln *Advances on Recent Containment Counterexamples* 

It is known that the symbolic fourth power  $I^{(4)}$  of every homogeneous ideal I in the homogeneous coordinate ring R of the projective plane is contained in the square  $I^2$  of the ideal. Until recently, no examples of such an I were known where  $I^2$  failed to contain the symbolic cube  $I^{(3)}$ . I will discuss the known examples and some additional recent results.